

Claims

1. A transgenic cotton plant comprising fiber cells stably transformed with a protein based polymer (PBP) expressed by a fiber-specific foreign gene driven by the tissue specific E-6 promoter, the cotton plant exhibiting improved water absorption, thermal characteristics, fiber strength, chemical reactivity including dye binding due to the increased protein content of the fiber.

2. The transgenic cotton plant of claim 1, wherein the gene is the (GVGVP)₁₂₁ gene.

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Claims

1. A transgenic cotton plant comprising fiber cells stably transformed with a protein based polymer (PBP) exhibiting improved water absorption, thermal characteristics, fiber strength, chemical reactivity including dye binding.
2. The transgenic cotton plant of claim 1, which contains the repetitive amino acid sequence GVGVP.
3. A expression cassette which comprises a fiber specific promoter driving the protein based polymer gene, balanced by a terminator, selectable marker genes with regulatory elements to facilitate transformation of plant cells.
4. An expression cassette of claim 3 wherein the gene contains the repetitive amino acid sequence GVGVP.
5. As expression cassette which comprises the fiber -specific promoter E-6.
6. As expression cassette wherein the gene is synthetic, not found in nature and the gene sequence as well as physical/chemical properties of the polymer could be altered at will.

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